

**SLIDING EXERCISE APPARATUS AND RECREATIONAL DEVICE****TECHNICAL FIELD AND INVENTION**

The present invention is directed to the use of a stick-on sheeting material, preferably in the form of a low friction adhesive graphic sticker, applied to a multiple of surfaces enabling a user to slide along a support surface. In practicing the present invention, an avid sports board enthusiast can develop sports board skills even when climactic conditions or geography would otherwise prohibit recreational activities and skill development exercise. Further, even without a sports board, one wishing to engage in sliding sport recreation, can adhere suitable stick-on sheeting material to one's outer clothing and shoes as well as to a variety of surfaces to again enable a user to engage in sliding recreational activity.

**BACKGROUND OF THE INVENTION**

Virtually all sports board and ski enthusiasts face the problem of how to maximize recreational practice, skill development and exercise during times of the year when use of such equipment is not feasible. For example, snow boarders find that after a full winter season, their skills are enhanced but after the spring, summer and fall months of inactivity, board skills must be redeveloped and tuned once winter conditions provide the appropriate back drop for practicing the sport.

Not only do winter sport enthusiasts face the grim prospect of having to go long periods between board usage but others such as surfers face similar

5 constraints. Obviously, the surfer can only effectively use a surf board when  
ocean access is available. There are times when surfers must travel inland and  
away from major bodies of water preventing board usage.

10 In addition, even when the practicing of board skills are not the focus of the  
recreational activity, it has been determined that there is a need to create sliding  
surfaces for shear recreation. For example, it is contemplated that there is an  
unsatisfied need to develop both permanent and temporary recreational systems  
which include ramps, jumps, chutes and slides of limitless dimension and design in  
order to enable both children and adults to experience the thrill of traversing an  
inclined low friction durable surface. The present invention can thus be employed  
as an adjunct to, for example, modifying an existing facility to transform the  
facility into a recreational and skill-enhancing facility quickly and inexpensively.

15 It is thus a first object of the present invention to provide a simple, effective  
yet low cost expedient which can be applied to boards and surfaces upon which  
the boards are intended to slide upon for enabling sliding board usage when  
climactic conditions would otherwise prevent such activity as well as for general  
recreation.

20 As noted above, in addition to board usage, it is also recognized that,  
recreationally, many of those who are physically active enjoy the opportunity to  
slide along a low-friction surface for the sheer thrill of developing speed and control  
as the sport is pursued. In the past, this was recognized by the producers of

5 products such as portable water slides. The referenced product required that  
water being applied to the surface of a rolled out piece of flexible plastic material  
to reduce friction whereupon a user would jump onto the sliding surface and slide  
along its length. Because the typical portable waterslide recreational devices of  
the prior art require the application of water to reduce friction between a user and  
10 the sheet of flexible sliding plastic, the device was inappropriate for use indoors,  
during cold climactic conditions or when the user, due to such conditions, was  
required to wear clothing not designed to contact moisture during use.

In light of the above, it is yet a further object of the present invention to  
provide a recreational device which would enable a user to progress along a sliding  
support surface without the need for the use of a sports board or any liquid  
5 medium to reduce friction.

These and further objects will be more readily appreciated when considering  
the following disclosure and appended claims.

## **SUMMARY OF THE INVENTION**

20 In a first embodiment, the present invention is directed to a sliding exercise  
apparatus and recreational device comprising a sports board being of sufficient  
rigidity to support a user. This sports board is provided with a top for contacting a  
user and a bottom for sliding along the support surface. The bottom of the sports  
board acts as a substrate for receiving stick-on sheeting material, the stick-on

5 sheeting material having an adhesive layer for adhering the stick-on sheeting material to the sports board and a low-friction durable layer for sliding engagement with the support surface. The support surface, itself, is intended to employ low-friction durable sheeting for contacting the stick-on sheeting material located on the sports board.

10 As a second embodiment, the present invention is directed to a recreational device comprising the combination of a support surface and stick-on sheeting material having an adhesive layer and a low-friction durable layer, the adhesive layer being applied to a piece of wearing apparel of the user. The low-friction durable layer of the stick-on sheeting material is intended to contact the support surface during use. As in the previous embodiment, ideally, the support surface has a low-friction durable sheeting for contacting the stick-on sheeting material of the user.

As a third embodiment, the low friction durable sheeting of the present invention can be placed on such diverse structures as slides, trampolines, ramps, tarps, exercise pads, railings, sleds and the runners of ski bikes in order to produce low friction durable surfaces for sliding. The sheeting material can also be placed on carpets to temporarily convert an indoor residential environment to a recreational and sports activity center. In addition, all of the low friction durable sheeting material can be produced with graphical information to enhance the visual

5 impact of the present invention and, where desirable, for displaying advertising and related messages.

## **BRIEF DESCRIPTION OF THE DRAWINGS**

Fig. 1 is a perspective view of a typical sports board, in this instance, a snow board, being provided with stick-on sheeting material so that the board can  
10 be used in practicing the present invention.

Figs. 2a and 2b are perspective and cross-sectional views, respectively, of a typical fabricated sports board, again, for practicing the present invention.

Fig. 3 is a perspective view of a user being provided with stick-on sheeting material at certain strategic locations to enable the user to practice the present  
15 invention by traversing a support surface.

Fig. 4 is a perspective view of a typical rail having been wrapped with the stick-on sheeting material of the present invention as well as a board which is depicted in contact with the wrapped rail.

Fig. 5 shows a perspective view of a typical ramp and gym mat bearing the  
20 stick-on sheeting material of the present invention which converts these articles to recreational devices contemplated for use herein.

Fig. 6 shows a typical perspective view of a traditional sliding ramp of the type used in recreational water parks. In this instance, the slide has been used as

5 a support for sheets of stick-on material of the present invention to enable the use of such slides without water.

Fig. 7 shows, in perspective, a typical trampoline and user practicing the present invention.

Fig. 8 shows, in perspective, a ski bike, intended to be used on snow-  
10 covered slopes employing the present invention so that it can now be used in dry environments and indoors.

## DETAILED DESCRIPTION OF THE INVENTION

As noted previously, as a first embodiment, the present invention is directed to a sliding exercise apparatus and recreational device comprising a sports board being of sufficient size and rigidity to support a user. Fig. 1 shows snow board 10 which has been modified enabling it to be used in practicing the present invention.

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Virtually any sports board such as a snow board, surf board, skis, a skate board or a body board can be employed. For the sake of brevity, only a snow board was shown as element 10 of Fig. 1. This board is provided with top surface 11 supporting bindings 12 and bottom surface 16. Under ordinary conditions, bottom surface 16 would be intended to contact and traverse upon a snow covered slope. However, in practicing the present invention, snow board 10 is intended to slide along a support surface, and as such, bottom surface 16 has been made to receive suitable stick-on sheeting material 13.

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5 Stick-on sheeting material 13 is comprised of an adhesive layer 15 which  
can be provided with a removable backing material (not shown) which can be  
peeled from stick-on sheeting material 13 prior to use. Stick-on sheeting material  
13 can be provided in blocks or sheets which can be cut to size to fit over the  
entire bottom surface of board 10, or alternatively, can be selectively placed to  
10 create areas of low-friction and relatively high-friction enabling a user to control the  
board's sliding characteristics on the support surface as one's skill level increases.  
In any regard, stick-on sheeting material 13 is provided with adhesive layer 15  
enabling the stick-on sheeting material to selectively and preferably removably  
adhere to bottom surface 16. This stick-on sheeting material is also provided with  
15 a low-friction durable outer layer 14 enabling board 10 to traverse support surface  
37 (Fig. 3) as discussed hereinafter.

Besides being able to convert the suitable sports board to practice the  
present invention, the present invention further contemplates dedicated boards  
produced solely for use herein. In this regard, reference is made to Figs. 2a and 2b  
20 showing a typical rectangular board 20 having cushioned top surface 21 and  
bottom surface 22 composed of any number of cushioning layers such as  
styrafoam. To add structural rigidity, top surface 21 and bottom surface 22 can  
encase a rigid membrane such as a segment of plywood 25 to complete the  
composite.

5 Board 20 is further provided with stick-on sheeting material 23 having an adhesive layer for adhering sheeting material 23 to the surface of bottom 22 while being provided with a low-friction durable layer for engaging in sliding contact surface 37.

As further noted previously, in addition to converting existing sports boards  
10 for use herein, it is also contemplated that the present invention directed to a sliding exercise apparatus and recreational device shown by the combination of Fig. 3. In this instance, support 37 provided with upper surface 35 is composed of a low-friction durable sheeting. Low-friction durable sheeting 37 can be composed of an suitable low-friction durable material such as nylon, Texlon, sailcloth, Dacron and polyester resins in sheets which can be rolled out onto to a suitable support. As shown in Fig. 3, low-friction durable sheeting 37 is simply applied to an existing sloping hillside converting the hillside into a low-friction sliding apparatus.

Although not shown, low-friction durable sheeting 37 can be virtually any length and width and various lengths of such material can be laid end to end and side to  
20 side as shown in applicant's prior U.S. Application Serial Number 09/344,302 filed on June 24, 1999, the disclosure of which is incorporated herein by reference.

The slide surface created by low-friction durable sheeting material 37 can be placed on any support surface whatsoever including custom made ramps, frames and even horizontal surfaces both indoors and outdoors as climactic conditions and  
25 environmental concerns present themselves. As further shown in the referenced '302 application, frames, pillow-like cushions and other expedients can be placed



5     beneath and in conjunction with a low-friction durable sheeting 37 to create  
bumps, moguls, dips and protrusions enhancing the degree of difficulty in  
practicing the present invention and thus varying the skill set necessary in using it.

As further noted previously, in addition to employing a sports board such as  
boards 10 and 20 of Figs. 1 and 2, the stick-on sheeting material contemplated for  
10     use herein can be applied to a piece of wearing apparel of user 30 (Fig. 3). As in  
the previous embodiments, the stick-on sheeting material can include a low-friction  
durable layer and an adhesive layer, the latter facilitating the application of the  
stick-on sheeting material to the users clothing or wearing apparel. For example,  
as further shown in Fig. 3, stick-on sheeting material 34 can be applied directly to  
15     the surface of the user's knee pads 33 enabling the user to slideably progress  
down sheeting material 37 upon surface 35. Alternatively, stick-on sheeting  
material 32 can be applied to the soles of shoes 31 enabling user 30 to progress  
down sheeting material 37 upon surface 35 while standing. This latter activity  
would greatly enhance a user's ability to balance upon a low-friction surface  
20     increasing one's skills which can be applied directly to such sports as snow  
boarding and surfing. As such, the present invention is not only recreational but  
also capable of providing a user with beneficial skills.

Turning to Fig. 4, rail 40 typical of a handrail installed on a staircase, is  
depicted. The construction of handrail 40 is again typical consisting of vertical  
25     support members 41 and diagonally constructed handrail 42, the angle of

5 inclination of which generally parallels the angle of the staircase upon which it is installed.

It is quite common for skateboarders to jump upon a handrail and slide down the rail. A similar effect can be achieved in this instance by wrapping handrail 42 with the stick-on sheeting material 43 of the present invention. By wrapping either  
10 the top surface or the entire surface of handrail 42 with the low friction durable sheeting material 43, handrail 42 can be made selectively into a sliding surface which both protects handrail 42 from abusive contact with a sliding board and also is capable of being converted back into a traditional handrail by removing sheeting material 43 therefrom. In use, board 44, supporting a rider, can be caused to  
15 travel along the surface of sheeting material 43. To enhance sliding contact, board 44 can be used to receive stick-on sheeting material 45 as described with respect to Fig. 1 above.

Fig. 5 depicts a rather simplistic but effective means of creating a recreational device out of parts which were never intended for that purpose. In  
20 this instance, a ramp 50 having horizontal platform 52 and incline surface 53 is shown. At the bottom of ramp 53 is placed a typical gym mat 51 having body portion 55. Both the gym mat and incline surface 53 are selectively covered by low friction stick-on sheeting material 56 and 54, respectively. In use, one could stand on platform 52 and slide either with or without a board down incline surface

5 53 on stick-on sheeting 54 and continue sliding along gym mat 51 on the surface created by stick-on sheeting material 56.

As in all of the embodiments disclosed herein, sheeting material such as sheeting 54 and 56 can be applied to an entire surface or selectively applied to a surface in order to create certain safety characteristics and points of interest. For example, edges along ramp 53 and gym mat segment 55 can be left without the coating of sheeting material so that as a user progresses too close to an edge, relatively higher friction areas will contact the user thus slowing the sliding motion and helping to prevent the user from falling from the sliding surface. In addition, segments within a sliding surface can be left without stick-on sheeting material to provide areas of relatively high friction to enhance the sliding experience. For example, enhanced skill and dexterity can be promoted by encouraging a user to navigate over a surface while avoiding high friction areas in order to increase speed.

Fig. 6 typifies the application of the present invention to an environment which was not intended to be used in the manner suggested herein. Specifically, ramp 60 typifies an inclined waterslide ramp which is intended to receive and to channel a continuous stream of water upon which a user rides in traversing down waterslide 60. The waterslide 60 is provided with upturned curved edges 61 and can be employed to receive stick-on sheeting material 62 in order to provide a low friction surface thus obviating the need for water. It is envisioned that a

5 preexisting waterslide park could be completely converted to a dry facility while maintaining the recreational enjoyment typifying such facilities.

Turning to Fig. 7, it is well known that trampolines have been employed by sports board enthusiasts to practice their jumping skills. For example, the appended figure discloses an individual 75 on snow board 76 jumping on  
10 trampoline 70. The trampoline includes frame 73 and chord 72 attaching fabric sheet 71 thereto.

In prior use of the trampolines to practice jumping, the somewhat sharp edges of the sports boards were known to cut or excessively abrade the trampoline fabric. To deal with this issue, users would oftentimes put duct tape over the  
15 edges of the board. This remediation is unsightly and can adversely affect the sensation that a user would otherwise experience.

The present invention, by contrast, employs the stick-on sheeting material 77 on the underside of board 76 either with or without padding between the board and sheeting material. In addition, the present invention contemplates, as an  
20 optional expedient, the use of the same low friction sheeting material 74 shown in partial cut away fashion on top of fabric 71. This additional sheeting material further acts to protect fabric 71 and changes the coefficient of friction of the trampoline to change the tactile experience of the user.

5 Finally, Fig. 8 depicts one of many creative ways to which the stick-on low friction and durable sheeting material of the present invention can be employed. For example, bicycle 82 can be fit with runners 83 and 84 for use on incline surface 80. If runners 83 and 84 are configured into ski-like segments, bicycle 82 can be employed on a snow-covered slope. Alternatively, ramp 80 can be used  
10 indoors by covering it with low friction stick-on sheeting material 81.

It is contemplated that the present invention can be used on a multitude of support surfaces from carpets to concrete which are horizontal, inclined or declined and having smooth, rough or mogul-like contours. It is also contemplated that the present invention can be employed on even inflatable supports as the nature of the support is not a critical feature in practicing the present invention. Numerous sports boards can be employed such as snow boards, surf boards, skis, skate boards, body boards, sail boards, wake boards, water skis, sleds and the runners of ski bikes.